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John Deere Dubuque Works

Part I: Overview of Business

John Deere Dubuque works was established in 1947. The plant is one mile long and contains 1,465 acres north of Dubuque. The Dubuque Works manufactures crawler dozers, crawler loaders, skid steers, backhoe loaders, forestry track feller bunchers and harvesters, knuckleboom loaders, winches and components for various heavy equipment product.

Part II: Job Specifics

While at John Deere Dubuque works I was part of two teams. While on the Worksite Solutions team I wrote documentation new software/hardware going onto machines. I created what industry calls "documentation" or a training guide for how to set up the new system. Then, I worked on software testing. Here I was able to see embedded software at work and see how software is verified before being put into production.

Part III: Introduce the Problem

At John Deere, all software put onto a machine needs to be independently verified before being installed on a machine. Each unit, the students will be given a program written by someone else, to verify. They will need to read the requirements of the program carefully, determine the test values, and document the tests.

Part IV: Background

Students will be introduced to the formal concept of boundary analysis to optimize the time/number of cases

I would like to bring Mike McCabe into to talk to the classes about this, since it is not part of the AP Subset.

Part V: Business Solution

John Deere has a team of software testers who are independant from the software developers who take a clean, methodical approach to verifying the software is ready for production.

Part VI: Student Solutions

I believe students will see testing as a challenge to "break" other people's software. I think they will write with more attention to fringe cases, knowing a fellow student will test the program.